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A Brief Summary of Economic Conditions

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DESPITE a 14 percent decline during 1944 from the all-time high in the number of grain-consuming animal units—one of the largest declines in history—the number of units on January 1, 1945, was the third largest on record. Hog, chicken, and sheep numbers were reduced considerably, while cattle, horse and mule numbers declined moderately. By the end of 1945, hog, chicken and milk cow numbers will probably not be changed a great deal, but a further decrease is in prospect for the number of beef cattle, sheep, horses and mules. In contrast to a year ago, these reduced numbers plus large feed supplies will permit liberal livestock feeding in most areas until 1945 harvest of feed crops. * * * Estimates of 1944 cash receipts from marketings of crops—livestock not included—are now placed at 8.6 billion dollars, 8 percent above 1943. Greatest increases over 1943 were in the South Atlantic and South Central States. * * * Government actions in late February are designed to relieve the critical shortage of low- and medium-priced cotton clothing and household cotton goods. * * * Because of strong demand, prices received by farmers for eggs are expected to continue above last year for the next few months.

The 1945 Census of Agriculture

UNDER way since mid-January, this year's agricultural census is moving toward completion, with the first of the preliminary reports announcing the number of farms and acreage, by counties, expected to be released shortly. These reports are of especial interest to county agents and crop reporters who will find the information in them useful in connection with their work.

Before their publication, the preliminary census totals for each county are reviewed by a county advisory committee composed usually of the county agent and AAA committee members.

Such a committee has been established in practically every one of the 3,000-odd counties in the United States through the cooperation of the Extension Service of the Department of Agriculture. Crop reporters also are particularly interested because many of their number are presently employed as census enumerators. Because of their experience as crop reporters, the Census Bureau has commended the quality of their work and was eager to have their assistance. The Bureau is indeed grateful for the cooperation of crop reporters, especially in these trying days, for their help in counting noses, so to speak.

Under provisions of United States Code, Title 13, Section 216, the taking of the 1945 Census of Agriculture is mandatory. This law was passed by the 71st Congress and was approved by President Herbert Hoover on June 18, 1929. The taking of the mid-decennial farm census in 1945 is no new undertaking introduced into the succession of agricultural censuses which has been established. The first mid-decennial farm census was conducted in 1925 during the administration of President Calvin Coolidge.

The first United States Census of Agriculture was conducted in 1840 and continued at 10-year intervals

until 1920, thereafter at 5-year intervals. The interval between farm censuses was halved after the 1920 census in order to provide a more frequent basis of reference for annual estimates made by the Department of Agriculture and other agencies concerned with agricultural statistics.

There are many ways in which farmers, industry, and Government can use the information obtained in the agricultural census. For example, here are just a few ways farmers and other agricultural leaders will benefit: They will use it as a guide in planning acreage changes in particular crops and in classes of livestock, and for studying markets; a basis for making credit and other business transactions; and as an instrument to formulate policies. These benefits will be enhanced because the census is the only source where localized statistics in detail may be obtained. Crop reporters will be especially interested in this year's census as it will show in detail for the first time since the war started, the changes that have taken place in crops, production, yields, acreage, and many equally important items.

Industry likewise will benefit. It will use the census for measuring the supplies of raw materials, for determining the market for manufactured products, for determining trends and effect of new developments, and for guiding day to day decisions. Government agencies such as the Farm Credit Administration or Soil Conservation Service, will use the census as a basis for their planning and operations.

Equally important is the use that will be made of the agricultural census to prosecute the war. Need for production and distribution of food is assuming greater emphasis in the war economy. The availability of food may be a big factor in determining the future of the course of the war, especially as the number of men in the

armed forces increases overseas, and as more occupied territory is taken over by the United Nations. Accurate and up-to-date statistics on food supplies, transportation, and other information being taken in the 1945 agricultural census will enable agriculture, industry, and Government to provide more efficient methods to meet the

needs of the armed forces and United Nations.

Moreover, up-to-date agricultural statistics will be of fundamental importance in planning the reconversion of agriculture and industry from a wartime to a peacetime economy.

JAMES C. CAPT, *Director
Bureau of the Census*

Commodity Reviews

LIVESTOCK

LIVESTOCK numbers decreased sharply in 1944 after reaching a record high at the beginning of 1944. The number of all species of meat animals, as well as of horses, mules, chickens, and turkeys was lower on January 1, 1945 than a year earlier. Reductions were greatest in hog, chicken, and sheep numbers. Horse and mule numbers continued the declining trend begun soon after World War I. Cattle numbers were only slightly reduced during the year.

The strong demand for meat and other livestock and poultry products from the beginning of 1938 through 1943 caused a marked increase in total livestock numbers. By early 1944 livestock numbers had reached such a high level stocks of feed grains, accumulated in 1937-41, had largely been depleted so that supplies were relatively short. During 1944 the hog-corn and egg-feed price ratios were below average for most of the year and were much lower than in the preceding 2 years.

In view of the reduced livestock numbers together with the large grain harvest in 1944, feed-grain supplies until the 1945 harvest are adequate to meet all requirements for liberal livestock feeding and still leave a carry-over larger than at the end of the 1943-44 crop year.

Numbers of hogs, chickens, and milk cows probably will not be mate-

rially changed by the end of 1945. But a further decrease in the number of cattle other than milk cows, sheep, horses, and mules is in prospect.

At the first of this year there were an estimated 60.7 million hogs on farms, a decline of 28 percent from the record number on hand at the beginning of 1944. This marked reduction in number was foreseen early in 1944 when the spring pig crop was reduced 25 percent below the record crop of a year earlier, and when the fall pig crop was 34 percent smaller than the record fall crop of 1943. The sharp reduction in the number of pigs raised in 1944 was brought about by the most unfavorable ratio of hogs prices to feed grain prices during the year since the beginning of the war and the short supply of corn for feeding hogs before the record 1944 corn crop was harvested.

A record slaughter of cattle in 1944 decreased cattle numbers only about

Number of Livestock on Farms, January 1, 1935-39 average and 1943 to 1945

Item	1935-39 average	1943	1944	1945
Thousand head				
Milk cows.....	24,999	27,106	27,656	27,785
Other cattle.....	41,815	52,008	54,708	53,975
Hogs.....	43,932	73,736	83,852	60,660
Sheep.....	51,344	55,775	51,769	47,945
Horses.....	11,285	9,675	9,302	8,897
Mules.....	4,465	3,704	3,531	3,408
Chickens.....	405,108	540,798	576,441	511,130
Turkeys.....	6,035	6,704	7,572	7,491

**Index Numbers of Prices Received and
Paid by Farmers**

[1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio ¹
1935-39 average.....	107	128	84
1940.....	100	125	80
1941.....	124	132	94
1942.....	159	150	106
1943.....	192	162	119
1944.....	195	170	115
1944			
February.....	195	169	115
March.....	196	169	116
April.....	196	169	116
May.....	194	169	115
June.....	193	170	114
July.....	192	170	113
August.....	193	170	114
September.....	192	170	113
October.....	194	170	114
November.....	196	171	115
December.....	200	171	117
1945			
January.....	201	172	117
February.....	199	172	116

¹ Ratio of prices received by farmers to prices paid, interest and taxes.

1 percent during the year. An estimated 81.8 million head of cattle and calves were on farms at the beginning of 1945, as against 82.4 at the beginning of 1944. While the number of calves and young dairy stock decreased slightly during the year, the number of cattle of all other classes increased. The number of milk cows increased about $\frac{1}{2}$ percent to set a new all-time high of 27.8 million head, almost 3 million greater than the average for 1935-39.

One of the sharpest declines in calf numbers on record occurred in 1944. While the number of calves was reduced about $1\frac{1}{2}$ million head, the number of cows and heifers, including milk stock, increased nearly three-quarters of a million head. Historically, after the peak in the cattle numbers cycle has been reached there is a period of several years of increased slaughter of cattle, especially a large slaughter of cows, heifers, and calves. Thus cattle slaughter in 1945 may be a record high.

The decline in sheep numbers begun

in 1942 continued at an increased rate during 1944, and was one of the largest decreases in numbers for any year in this century. The January 1, 1945 total number of sheep on hand, including sheep and lambs on feed of 47.9 million head, was a decrease of 3.8 million or 7 percent from a year earlier. The number of sheep and lambs on feed at the beginning of the year was up about $1\frac{1}{2}$ percent from a year earlier. The number of stock sheep and lambs decreased almost 9 percent, from 45.2 to 41.3 million head, to the lowest level since 1928. The reduction in sheep numbers has been due largely to a short labor supply on ranches and farms and more profitable returns for labor utilized in the production of other crops and livestock. Present indications are the short labor supply situation will not be eased in 1945. Farmers and ranchmen saved a relatively small number of ewe lambs for herd replacements in 1944 and this tendency is likely to continue in 1945.

Both horse and mule numbers decreased in 1944, reflecting a small number of colts raised during the year and a relatively large rate of disappearance through death losses and slaughter. At the present rate of disappearance the number of horses and mules on farms in 1950 will be about 10 million head. Throughout the war period prices of horses and mules have been low relative to prices for meat animals and livestock products and this has tended to discourage the production of horse and mule colts.

DAIRY PRODUCTS

MILK production on farms during the last quarter of 1944 at a seasonally adjusted annual rate of 120 billion pounds was an all-time record. Because of ample feed supplies and a continuation of the highest unit returns on record resulting in favorable milk-feed ratios, this high level of production is expected to continue during the next few months.

The dairy production payments announced by War Food Administration for the last three quarters of 1945 are designed to obtain proportionally more butter than last year. Production payments for butterfat are a little higher than last year while the payments on whole milk will be a little less. For the second and third quarters whole milk payments will average 25 and 35 cents a hundredweight less, but the fourth quarter will be about the same. Payments for the second half of 1945 are contingent upon Congressional approval.

Despite seasonal increases, creamery butter production is lagging behind last year, which has necessitated larger set asides than last year. About 40 and 55 percent of the April and May creamery butter output is required to be set aside for Government purchase. During the next few months civilian supplies of butter will be at a record low, while slightly more cheese will become available.

POULTRY AND EGGS

THIS YEAR farmers intend to buy 4 percent fewer baby chicks than last year, but expect to grow 8 percent more turkeys, according to their February 1 intentions. Despite the usual differences between intentions and actual performance, which are dependent on what happens during the hatching season, the outlook for favorable egg and turkey prices and above average egg-feed and turkey-feed ratios indicate that farmers will probably carry out their intentions.

With 6 percent more turkey breeder hens on farms this past January 1 than a year earlier and with favorable conditions for turkey production, the 8 percent turkey increase is expected this year. Furthermore, military requirements for the coming year will probably be at least as large as in 1944, when the total demand for turkey meat exceeded the supply by a wide margin. Prices received by

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.

	5-year average		February 15, 1944	January 15, 1945	February 15, 1945	Parity price, February 15, 1945
	August 1909- July 1914	January 1935-Dec- ember, 1939				
Wheat (bushel)	dollars	0.884	0.837	1.46	1.46	1.52
Corn (bushel)	do	.642	.691	1.13	1.07	1.10
Oats (bushel)	do	.399	.340	.786	.721	.686
Rice (bushel)	do	.813	.742	1.91	1.75	1.40
Cotton (pound)	cents	12.4	10.34	19.93	20.20	19.99
Potatoes (bushel)	dollars	.697	.717	1.39	1.58	1.65
Hay (ton)	do	11.87	8.87	15.90	17.10	20.40
Soybeans (bushel)	do	.96	.954	1.85	2.06	2.10
Peanuts (pound)	cents	4.8	3.55	7.38	8.14	8.14
Apples (bushel)	dollars	.96	.90	2.94	2.46	2.58
Oranges, on tree, per box	do	*1.81	1.11	1.51	1.98	2.25
Hogs (hundredweight)	do	7.27	8.38	12.90	13.80	14.00
Beef cattle (hundredweight)	do	5.42	6.56	11.60	11.70	12.10
Veal calves (hundredweight)	do	6.75	7.80	13.00	13.20	13.60
Lambs (hundredweight)	do	5.88	7.79	13.20	13.00	13.60
Butterfat (pound) ¹	cents	26.3	29.1	50.9	50.9	*46.3
Milk, wholesale (100 pounds) ²	dollars	1.60	1.81	*3.31	3.35	*2.82
Chickens (pound)	cents	11.4	14.9	23.7	24.2	24.5
Eggs (dozen)	do	21.5	21.7	31.9	41.0	35.8
Wool (pound)	do	18.3	23.8	39.0	40.1	40.4

¹ Revised.

² Comparable base price, August 1909-July 1914.

³ Comparable price computed under sec. 3 (b) Price Control Act.

⁴ Comparable base price, August 1919-July 1929.

⁵ Does not include dairy production payments made directly to farmers by county AAA offices.

⁶ Adjusted for seasonability.

⁷ Preliminary.

turkey growers averaged 31.6 cents per pound in 1944, the highest on record.

Egg production during January was 346 million dozen, 8 percent below a year earlier. Because the 470 million hens and pullets on farms January 1, 1945 were 9 percent below a year earlier, a continuation of the declining rate of egg production is in prospect for this year, possibly averaging 8 to 10 percent below last year.

Prices for eggs received by farmers in mid-February averaged 35.8 cents per dozen, 105 percent of parity and 3.9 cents more than in February 1944. During the next few months egg prices will probably be higher than last year, largely because of heavy civilian demand and a military procurement at least as large as in 1944.

Along with very tight civilian supplies of red meats, poultry meat supplies are far below those of last year and have been declining seasonally in recent weeks. Yet the armed forces requirements for poultry meat are very large. To aid them in getting 70 million pounds of canned chicken and turkey, War Food Administration recently issued an order setting aside the sale of all canned poultry for Government purchase. In addition, the armed forces are buying about 4 million pounds of dressed chicken a month in areas covered under War Food Order 119 and an undetermined amount elsewhere.

INCOME

REvised estimates of cash receipts from farm marketings of crops in 1944 are now placed at 8,604 million dollars, 8 percent above the revised estimate of 7,980 million dollars for 1943. Important in bringing about this gain for 1944 were the relatively large acreages harvested, high yields, and slightly higher prices for most crops. High percentage gains were shown in wheat, cotton, tobacco, citrus fruit and apples.

Regionally the greatest increases

over 1943 were made in the South Atlantic and South Central States.

Cash Receipts from Farm Marketings of Crops, 1943 and 1944

Crop group	1943	1944	1944 as percent of 1943
	Mil. dol.	Mil. dol.	Percent
Food grains	947	1,191	126
Feed grains and hay	1,126	1,116	99
Cotton and cottonseed	1,318	1,490	113
Oil-bearing crops	675	477	71
Tobacco crops	540	717	133
Fruit and nuts	1,203	1,476	123
Vegetables	1,592	1,459	94
Sugar crops	167	123	115
Forest products	101	110	109
Other crops	371	414	112
Total	7,980	8,604	103

NOTE.—Estimates of cash receipts from marketings of livestock are not yet available.

COTTON

SEVERAL Government actions in late February are designed to relieve the critical civilian shortage of low and medium priced cotton clothing and household goods.

A War Production Board order requires certain percentages of particular kinds of cotton goods to be set aside exclusively for the manufacture of low and medium priced civilian products.

The Office of Price Administration supplemented the WPB order by additional control of manufacturers' prices. Each manufacturer must redistribute his sales—the average of his selling prices must not be higher than the corresponding quarter of the base period, July 1, 1942, to June 30, 1943.

These actions, it is hoped, will help make needed cotton goods more available to consumers by summer. In addition, the following two actions are designed to raise the general level of cotton textile production.

Half the spindles now producing spun rayon, according to another WPB order, must be converted to cotton so as to increase the manufacture of needed textiles.

In addition, the War Labor Board ordered an increase from 50 to 55 cents in the minimum hourly wage of employees in textile mills, and a blanket wage increase of 5 cents per hour in mills involved in a recent wage dispute. The order also allows vacations with pay, a premium of 5 cents an hour for third shift workers, and widens the spread by as high as 5 cents an hour in the wage rates of lower- and higher-skilled jobs.

VEGETABLES

WITH few exceptions, prices for fresh market truck crops have been declining in recent weeks, both at shipping points and in terminal markets. This is usual for this time of year and reflects both a recession from the holiday level of demand and the arrival in the markets of somewhat more abundant truck crop supplies in general as winter and early spring production begins to appear in volume.

Weather so far this year has been mostly favorable for the planting, growth and harvesting of truck crops, though cold and dry weather have damaged and delayed development of the more susceptible crops in parts of California and Florida. Total production of the 18 winter season (January-March) truck crops this year is currently estimated to be 1,362,400 tons, 9 percent less than for the same period in 1944 but 44 percent greater than the 10-year (1934-43) average for the winter season. Total production of winter season crops in 1945, by individual crops, is indicated to be both above average and above last year for lima beans, carrots, cauliflower, celery, spinach, and tomatoes, but below both last year and average only for artichokes and green peas.

Indications are that production of winter season truck crops for fresh market shipment may exceed the quantities suggested in the goals by about one-third in the aggregate, and by varying amounts for all except kale, green peas, and shallots.

After making allowances for the quantities of truck crops that probably will be taken for noncivilian purposes, and including fall storage crops marketed after January 1, the total quantity of truck crops expected to be available to civilians on the fresh market during the first quarter of 1945 is 2,527 million pounds, 10 percent larger than that available to them in the corresponding quarter a year earlier. This comparison excludes potatoes and sweetpotatoes.

Throughout the first quarter of 1945, the high level of employment generally and large requirements are expected to support an active demand for fresh vegetables at prices as high and for quantities as large as last year during the corresponding period. Exceptions may include lima beans, carrots, and tomatoes.

The supplies of potatoes available to civilians since the first of the year, particularly in metropolitan markets, have been considerably smaller than normally might be expected at this season. This situation arose from the relatively rapid rate of movement of potatoes to market before January, from temporary embargoes imposed to relieve the overburdened transportation system, and from the shipping-permit restrictions put into effect in the principal late-potato producing areas in connection with the Government's procurement program. Market supplies of potatoes will not again be plentiful until the spring crop starts moving in considerable volume some time in May. In the meantime, supplies of the best grades and sizes will be insufficient to satisfy the demand at ceiling prices, and farmers will be able to market as table stock a greater-than-usual proportion of their smaller and lower quality potatoes.

The relative scarcity of late-crop white potatoes contributes in some degree to the demand for sweetpotatoes. Supplies of 1944-crop sweetpotatoes, likewise, have been dwindling at an unusually rapid rate. Farmers in general will be able to market a

larger-than-normal proportion of their total production, and at prices reflecting ceiling or near-ceiling levels.

FRUIT

CIVILIAN supplies of fresh citrus fruits from this season's large crop are expected to continue plentiful for the next few months, but those of apples and pears, now taken from storage, will decline seasonally.

The 1944-45 crop of oranges is about as large as the record large crop last season. This season's crop of Valencia oranges in Florida and California, which will be marketed chiefly this spring and summer, is indicated to be about one-eighth larger than the previous crop and about two-thirds larger than the 10-year (1933-42) average.

Supplies of lemons and grapefruit continue plentiful, but supplies of the latter will decline seasonally this spring when they may become smaller than a year earlier, partly a reflection of hurricane damage to the Florida

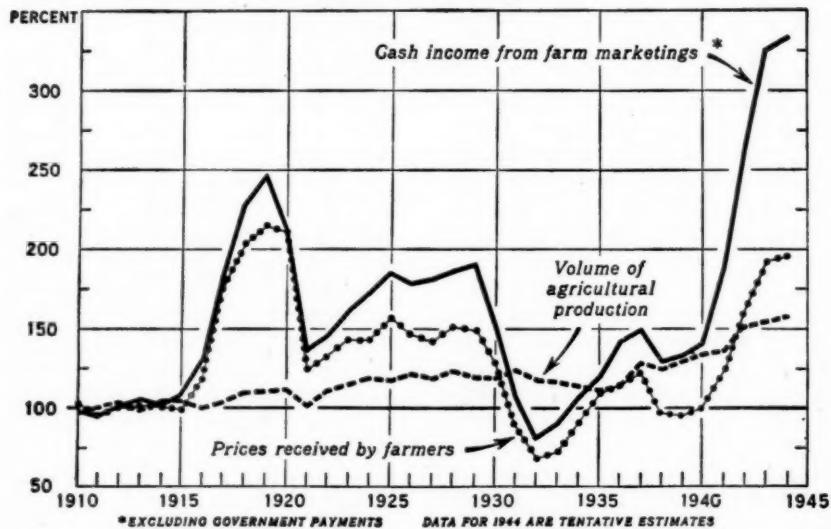
crop last fall. Recent prices for oranges and grapefruit have been near ceiling levels.

Because of heavy Government procurement of several leading varieties of apples in Washington and Oregon, through a set-aside order, civilian supplies of such apples will continue short for the remainder of this season. However, supplies of midwestern and eastern apples are larger than normal for this time of year. Recent prices for the better quality western apples have been near ceilings while those for midwestern and eastern apples, reflecting some deterioration in quality, have been somewhat below ceilings.

Civilian supplies of canned citrus fruit juices continue generally plentiful even though recent Government procurements have been heavy. Supplies of other canned fruits and fruit juices continue short. Prospective Government requirements from the 1945 pack of deciduous fruits are about as large as those from the 1944 pack. This points to short supplies for civilians again next season.

AGRICULTURAL PRODUCTION, PRICES, AND INCOME, UNITED STATES, 1910-44

INDEX NUMBERS (1910-14=100)



The Statistical Laboratory at Ames

WHEN Uncle Sam does some fact gathering on agriculture he gets more for his money now than he did a decade or so ago. He gets more information, more accurately and more promptly for about the same time and effort expended.

The Department of Agriculture is now able to obtain national and regional estimates quickly and accurately of basic data dealing with many important farm problems. In contrast to the old standard methods of sampling that require many surveys before accurate estimates are possible, the Bureau of Agricultural Economics, through its Statistical Laboratory at Ames, Iowa, is now in a position to sample farms, by means of the interview method, in any county in the Nation in a relatively short time.

Interview Method

The Bureau can do this because the Laboratory has developed the master sample technique which provides the necessary information and materials to carry out the interview type of sample quickly and efficiently. These developments in sampling are a product of the research in statistical methods carried out cooperatively by BAE and the Statistical Laboratory at Iowa State College in Ames.

Beginning about 8 years ago, the work of the Laboratory first dealt with improving crop and livestock estimates and now has become an integral part of the other statistical activities of the Bureau of Agricultural Economics as well as other Government agencies, notably the Census Bureau. Today a dozen or more persons, several connected with Iowa State College, are on the staff of the Laboratory at Ames. In a way, the Ames Laboratory serves agriculture in the field of

NOTE.—A similar statistical laboratory has been in operation for some time in Raleigh through the cooperation of North Carolina State College and BAE.

social sciences not unlike the Research Center at Beltsville does in the field of natural sciences. Both are continually developing new methods to do better jobs in their respective fields.

Master Sample

The most ambitious project of the Laboratory and the main one for the past 2 years, almost to the exclusion of others, has been the initial development of the Master Sample of Agriculture. Consisting of approximately 300,000 farms scientifically drawn from the 6 million farms in the country, one or more from every county, the sample will become a useful tool in gathering facts on many important agricultural problems.

One of the first big uses is in the 1945 census of agriculture, and under way now is an extension of the sample to make it available for population estimates. It is now being used in a national farm wage rate survey which has just started.

The manifold problems of estimating and allocating food and fiber supplies during the war have accentuated the long-felt need for a means of getting reliable information quickly and directly from the producers of agricultural commodities. The Master Sample, a cooperative project of Iowa State College, Bureau of Agricultural Economics, and Census Bureau, is designed to do just this.

The technical difficulties of drawing an adequate sample for any one special purpose were numerous, but once the sample is drawn it is readily available for a wide variety of inquiries. In the designing of such samples, which have been studied in the Statistical Laboratory since 1938, the principle of many small units widely scattered being preferable to a few large ones has been followed from the start. But the most efficient size of unit had to be learned from experience.

A sample of 800 Iowa farms visited in December 1938 furnished the evidence needed. It was learned that, with a schedule calling for an hour's time and with enumerators traveling by automobile, the most information per dollar could be obtained from units consisting of one farm or two contiguous farms.

The random selection of the sample unit posed another problem. Under Middle-West conditions the section, or square mile, was thought of first. It lends itself readily to the scheme of random drawing, and is easily located by the enumerator. The final step was to identify a group of farms with each section. This areal sampling unit yields unbiased estimates of farm populations, acreages, production, soil condition, equipment needs, etc.

The next job was to adapt the areal unit to other regions of the country—to those in the West where roads do not follow the land survey and to others in the East and South where the land survey post-dated the establishment of property lines. After a considerable amount of experimental sampling the areal unit was successfully adapted to all localities.

Density of population, natural boundaries such as roads and streams, and availability of aerial photographs are some of the factors which determined the size and shape of each sampling unit. The average size of the final 1,200,000 sampling units, however, worked out to be about $2\frac{1}{2}$ square miles containing 5 farmsteads. Thus, the Master Sample is really based upon units of farms rather than individual farms, a new approach in sampling technique applied in this manner.

Comprehensive File

In the Master Sample file are found over 3,000 county highway maps, thousands of aerial photographs, hundreds of soil surveys and geological section maps, a great deal of census data, and much other related materials. And these materials are continually being kept current. The use

of photographs is of interest. Because most of the sampling units had to be outlined without benefit of natural boundaries and because farmsteads are not located too exactly on many maps, aerial photographs were obtained through the cooperation of AAA and inscribed with the sampling units. This enables the enumerators to locate sample farmsteads without ambiguity.

Under the supervision of a joint committee of the cooperating bureaus, the Master Sample may be used as a whole or in part by Federal and State agencies. One survey of 100 counties has already been made. Several visitation schedules have already been taken in Iowa because the available maps and materials are readily adapted to particular needs, even though the farms are not in the Master Sample.

Other Projects

Because it is new and has attracted considerable interest, the Master Sample has been described in some detail. But the Statistical Laboratory has been engaged in other research projects. One is improving route samplings, an old and tested device of crop estimating. This method was adapted to forecasting the acreage, yield, and quality of the wheat crop in the Middle West. During 1940 the survey extended from Texas to Montana, preceding harvest by about 5 days. Through use of the crop meter, two small samples of wheat were taken from random points in the field that happened to fall at each 10th mile of wheat frontage. The wheat production in the Western Central States was determined within 2 percent of the final crop estimate, the sample consisting of only one six-millionth of the standing crop. Some avoidable biases were discovered, while others are suspected but not yet isolated. Owing to the success of this survey, Congress in 1941 appropriated funds to continue improving this sampling technique, but the war has interrupted the project.

Similar methods were devised for forecasting corn and soybean yields,

acreages, and quality. The cheapest way to estimate corn yield with a reasonable degree of accuracy was found to be a subsampling device whereby many ears in each random area were counted, an inexpensive process, while a few were measured for size and moisture content. Both of these projects have had to be suspended for the duration.

Experimental samplings are being studied for the purpose of forecasting marketings of livestock from given localities. Whether this can be developed to the point of general use before the war ends remains to be seen, but in a few instances it has proved useful in determining manpower and transportation needs.

These examples indicate the kind of research the Laboratory is doing but there will be much more when peace comes. Some of the staff members are now toying with the idea of using recent improvements in aerial color

photography to effect further improvements in crop estimating. There will probably be many post-war adjustment problems in agriculture in which the Laboratory can help supply new methods for obtaining necessary facts essential to the solution of the problems. The Master Sample can be used, other techniques now available can be employed, or new methods can be developed for particular needs.

In these days of rapid change, accurate and up-to-date information promptly supplied is essential to the intelligent solution of important farm problems. The research of the Ames Laboratory places BAE in a better position to more effectively serve farmers, as well as private and governmental agencies, in the collection and analysis of needed facts.

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Short-Term Farm Debt Picture

MODERN agriculture could not function effectively without short-term credit. The seasonal variation in income and the heavy investment in equipment, livestock, and fertilizer account for the use of large amounts of operating credit for farm production. In addition, short-term credit is used widely for family living on farms. Ordinarily, this is the only type of credit used by tenants and often directly affects the progress they make in improving levels of living and in becoming farm owners.

Commercial banks and Government agencies are important sources of short-term credit. Also, a substantial amount of such credit is extended by merchants, implement dealers, fertilizer companies, finance companies, livestock firms, landlords, and private lenders. The total amount of short-term debt owed by farmers on January 1, 1944, is believed to have been about 3.5 billion dollars.

Short-term credit is the usual financial medium by which wartime expansion of agricultural production has been accomplished. Such credit use often affects the whole debt structure of agriculture for years. An examination of short-term credit expansion during World War I will reveal its connection with many of the financial difficulties of farmers and will be of use in an analysis of the current situation.

World War I and After

Expanding agricultural activity and rising farm expenditures from 1914 to 1920 were accompanied on the whole by freely available short-term credit. Short-term loans extended by commercial banks alone rose from 1.6 billion dollars in the spring of 1914 to 3.9 billion dollars by the end of 1920. And the volume of credit extended by merchants, dealers, and miscellaneous lenders had a similar rapid rise.

The larger part of this credit was obtained on notes maturing in 6 months or less. Farmers customarily depended upon renewals to carry them until they were able to pay out of farm income. But the sharp drop in agricultural prices beginning in the middle of 1920 caused lenders in many instances to refuse renewals or to require additional security.

By 1921 the situation became critical. An increasing number of banks, dealers, and other creditors found themselves overextended on short-term farm paper. They curtailed new lending and began to insist upon more adequate security for their outstanding loans. Many lenders, fearful of the declining price level, liquidated the security of their borrowers, especially livestock, equipment, and other items of physical working capital. This forced out of farming many tenants and numerous owners who had little equity in their real estate.

A large number of farm owners could only repay their overdue short-term operating debts by getting mortgage loans on their farms. Well after the end of the active farm market in the middle of 1920, farm-mortgage debts continued to rise—increasing about 600 million dollars in 1921 and 1922. Much of this increase was for the refinancing or refunding of short-term debts. And further, the operating debt accumulated during the World War I inflationary period and then refunded into mortgage debt quite probably contributed greatly to the large number of farm foreclosures during the middle twenties and early thirties.

World War II

The trend of farmers' short-term indebtedness in this war has in some respects been similar to the last war. The total outstanding short-term debt of farmers to commercial banks and Federal agencies (excluding nonrecourse Commodity Credit Corporation loans) increased from 1.5 billion dollars on July 1, 1939 to 1.8 billion dollars on July 1, 1944, an increase of 20 percent.

The volume of such credit has been influenced by two opposing forces. On one hand, greatly expanded farm production with higher unit costs has tended to increase the use of short-term credit. On the other, large farm incomes and shortages of goods have tended to decrease the need for this type of credit. So far, the net effect of these forces has been fewer borrowers, but larger loans.

Production credit association loans made in 1939 averaged \$1,365, and by 1944 they averaged \$2,231. Initial rural rehabilitation loans made by Farm Security Administration averaged \$560 in the fiscal year 1939 and \$1,105 in 1944. Supplemental loans made to existing FSA borrowers increased from \$213 to \$321 during the same period.

In general the short-term debt situation of farmers has improved. Delinquencies are much less frequent and there has been a shift from dealer and merchant credit to lower cost sources such as commercial banks and Federal agencies. Many of the larger institutional loans represent consolidation of scattered debts. However, a crop failure or a sudden drop in prices would leave some farmers with an excessive debt that might cause serious trouble.

Differences during Both Wars

Despite the increase in operating credit now used by a large number of farmers the situation may not become so dangerous as that which evolved from World War I. The improvement in the farm-credit facilities serving farmers is of major importance. The commercial banking system has profited by its experience in the agricultural depressions of 1921 and early thirties. Caution in making loans, insurance of deposits, and a higher percentage of their investments in liquid Government bonds are factors of strength. The Production Credit System and the Farm Security Administration, which did not exist in the previous period, are means by which funds may be channeled to farmers in event of a credit emergency.

For many farmers the vivid memory of what happened after World War I has tended to keep debts from excessive levels. One other factor not present to the same extent in the last war is the drastic curb on expenditures. Automobiles, farm machinery, building materials, and household equipment have been relatively scarce. In addition to keeping non-real-estate debts at conservative levels, the inability to buy a large volume of goods has caused much of the high farm income to flow into liquid reserves of cash, bank deposits, and war bonds. Also mortgage debts on the whole have been reduced. As of the present time, many farmers are financially in a position to weather a period of adjustment without serious consequences.

Post-War Outlook

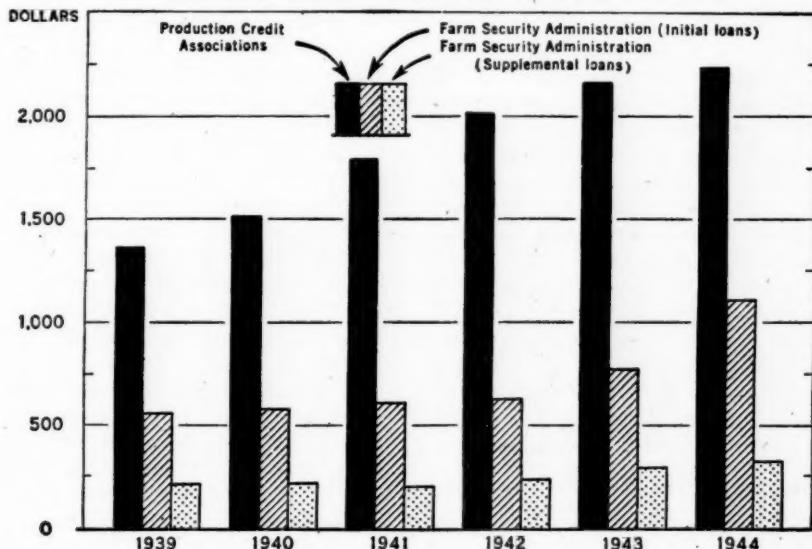
When the war ends many farmers will find themselves with a heavy debt incurred for farm production. As a whole, however, the short-term debt situation of agriculture may not then be serious. But the danger is not over. For a year or two immediately

after the end of the war it will probably be very easy to go into debt.

Prices of farm products may still be relatively high and the incentive to maintain maximum production will probably remain strong. It is expected that shortages of labor, feed, fertilizer, and machinery—the current curbs on expansion—will have been largely eliminated. Many farmers, especially returning veterans and war workers, may use credit to increase their operations. In addition to spending more for greater production, expenses will be heavy in replacing assets which have been wearing out. Farm buildings, fences, land, and machinery have been rapidly depreciating. The situation is similar with respect to consumer goods—automobiles, radios, washing machines, and refrigerators. The longer the war continues the greater may be the unfilled need for all kinds of goods.

It was estimated that on January 1, 1944, farmers had accumulated about 12 billion dollars in cash and other liquid assets. Much of this will be used in the immediate post-war

AVERAGE SIZE OF PCA AND FSA SHORT-TERM LOANS MADE PER YEAR, 1939-44



period for operating capital and for postponed purchases. It is quite probable, however, that many of those who need to make the heaviest expenditures do not have very large reserves of cash or war bonds. Farmers who previously suffered long periods of low income, tenants, and newly returned war workers and veterans may be especially in need of loans to make adjustments in their farming operations as well as to buy supplies and equipment for both farm and home.

As farmers increase their expenditures after the war the volume of short-term credit can be expected to expand greatly. Present indications point to plentiful credit from both public and private sources. Unwise use of credit may be encouraged by some lenders. It may well be that at the close of the war while the demand for farm products continues strong, a flurry of speculation will

occur in agriculture. During this period there is danger that short-term credit will be used in such ways as to involve many farmers in debts which will either embarrass them for many years or bankrupt them.

Sometime during the early post-war years agricultural prices may turn downward. As this turning point is approached the risks in assuming short-term credit become greater. The first impact of a price decline is on debts with near-term maturities, and a heavy debt incurred on the eve of a price decline could be disastrous. Credit obtained at one price level is difficult to repay at a lower one. These immediate post-war years should be an adjustment period in both debt structure and farm organization.

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Surplus War Cargo Planes to Move Food

THE speed of the airplane in transporting perishable farm products to distant markets is agriculture's principal interest in air transportation. Development of air-freight transportation will permit shipment of fully matured and ripened products of excellent quality instead of products of various degrees of ripeness as now dictated by the length of time required for land transport. Air transportation will make possible the shipment of products to many markets not now accessible because of the limitations of existing transportation facilities. Perishables shipped by air-freight could be retailed in eastern markets 24 hours after harvest in California as contrasted with rail-freight movement which requires 10 days or more to reach the eastern seaboard.

Potential Plane Capacity

The problem of the use of military transport planes should be examined in terms of potential carrying capacity

under modern methods of operation rather than as a specific number of planes.

The comparisons in the accompanying chart were made between the annual potential carrying capacity of 5,000, 10,000, and 15,000 assumed surplus war transport aircraft (20 percent four-engined and 80 percent two-engined) and the ton-miles produced by the various surface carriers in 1939. In presenting data on the carrying capacity of transport planes, it is realized that available cargo suitable for transport by aircraft in the United States is not likely to be adequate to fully utilize a large proportion of these surplus planes. Annual ton-miles per aircraft were calculated on the basis of data in two previously published reports on perishable truck crops issued last year by the Bureau of Agricultural Economics.

Reconversion costs for freight carrying would be relatively low. However, reconversion costs for passenger

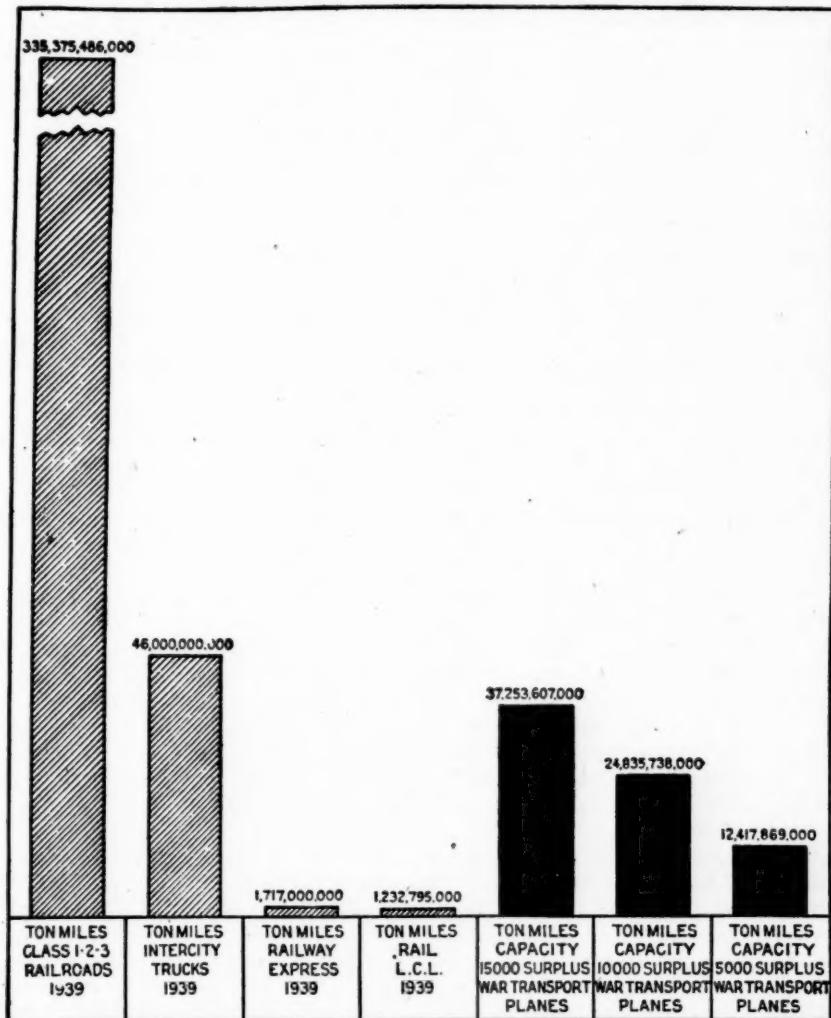
carrying probably would be too high to allow the extensive use of surplus transport planes for this purpose. Availability to airlines of new and improved equipment would also be a limiting factor. A relatively small number of surplus planes may be used by the airlines until more modern equipment becomes available.

Two methods of disposal of these transport planes are: (1) Retention by

the armed forces, (2) absorption by domestic and foreign commercial aviation. According to a recent report prepared by Harvard University for the Senate Committee on Military Affairs,¹ not more than 300 planes could be fully utilized in domestic con-

¹ *Disposal of Surplus Aircraft and Major Components Thereof*, Report of the War Contracts Subcommittee to the Senate Committee on Military Affairs, June 26, 1944.

Ton Miles of Freight Handled by Railroads and Intercity Buses in 1939, and Ton-Mile Capacity of Surplus War Transport Planes



Edward S. Evans Transportation Research

tract cargo service. Part of the purpose of the present analysis is to show that probably there will be domestic contract air cargo for more than the 300 planes.

Contract Carrier Method

The quantity of air-freight in the post-war era partly depends upon the absolute as well as the relative costs of air transportation. The cost of air transportation apparently is greatly influenced by the type of air carrier operation used. The contract-carrier type of air-transport operation makes possible certain economies in handling air-freight shipments which apparently result in lower costs of operation than for common carriers. The present airlines and railroads and some trucking firms operate as "common carriers." Usually the common carrier travels designated routes, makes scheduled stops, and accepts all freight offered by shippers, in conformity with its published tariffs and within its capacity to serve. For the most part, contract carriers are not regulated so strictly and serve specific shippers only under special and individual contracts.

Any freight airline beginning operations within the next few years might utilize surplus war transport ships of the type of the C-47 and the C-54A. A freight airline can readily use ships that have been in active military service 2 or 3 years. Ships so purchased probably could be operated over a period of 5 years or more at very low amortized capital cost. Quantities of surplus parts also may be available under certain conditions.

A large number of demobilized Army and Navy personnel probably will be available at wages commensurate with other occupations of similar skill and risk.

The 10-cent ton-mile cost of operating C-47 planes in hauling strawberries and tomatoes, and the 6.55 cents per ton-mile cost of operating C-54A planes in moving lettuce, as shown in two recent BAE studies, illustrate the economies which may be possible. The assumptions and the

basis for the assumptions made in these cost studies follows.

Available cost figures indicate, although not conclusively, that airlines of medium size have unit costs as low as or lower than much larger airlines. At the end of 1941 three medium-sized companies averaged 17.7 transport planes apiece. Converted into cargo-carrying capacity of C-54A's this would be equivalent to about an 8-plane fleet. This would provide a sufficient number of planes to have 6 in operation and 2 in reserve. On long hauls, 3 ships would be flying daily in one direction and 3 would be flying in the opposite direction. It is recognized that costs for an all-freight operation may differ from passenger operation, and also that the relation between total plane capacity and efficiency of operation may be different for C-54A's than for C-47's.

Interchange of Products

The contract-carrier operation should be based on the interchange of agricultural products and manufactured products. An all-freight operation probably could only succeed with difficulty in moving either agricultural or manufactured products exclusively. The quantities interchanged must be fairly constant. The principal movement of commodities probably will be perishable agricultural products from west to east and south to north, and industrial products on the return haul. No doubt there would be some contrary minor movement of commodities.

It probably will be possible to provide full planeloads of agricultural perishables to move by air from extensive agricultural areas to metropolitan centers, but it probably will not be possible, at least in the beginning, to merchandise and ship by air a sufficient quantity of manufactured articles to provide full planeloads from a manufacturing center to an agricultural center. At present there are no data available which indicate how large the east-west or north-south load will be. The principle of the interchange of agricultural perish-

ables with manufactured products is illustrated in the accompanying map.

Market Over 750 Miles Away

The route for a contract carrier operation between a manufacturing center and an agricultural center should be as direct as possible. It should be along an established airway equipped to permit night flying. In order to justify the cost of air transportation between these two centers they should be at least 750 miles apart. However, the longer the distance to be hauled the fewer the number of commodities which can stand any given level of rates. Preliminary research indicates that air-borne agricultural perishable products could compete most advantageously with surface-borne products when transported between 1,000 to 1,500 miles.

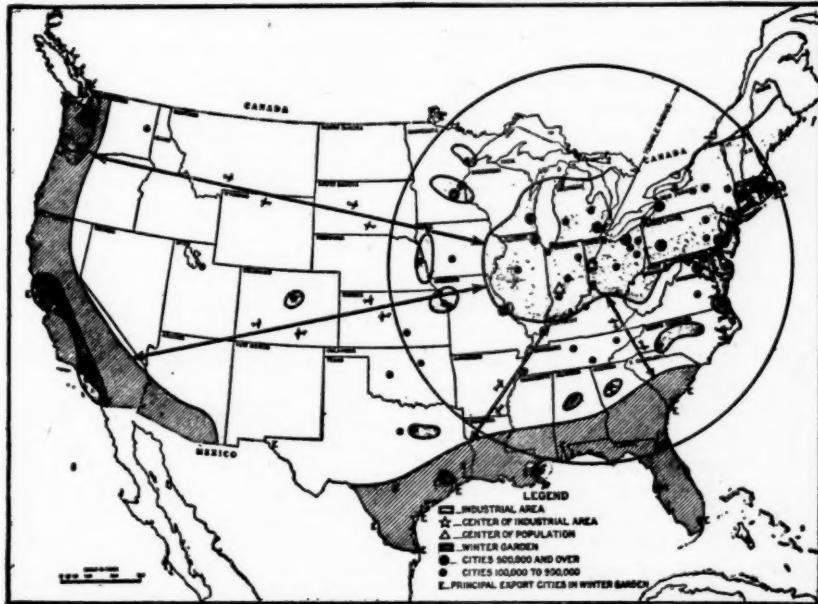
The metropolitan centers should be a combination of cities so that sufficient cargo may be collected for the west-bound or south-bound movement. For efficient operation of the 8-plane fleet, the centers should be within an

approximate radius of 300 miles. The metropolitan center should be a manufacturing city which produces a variety of relatively high-priced manufactured articles.

To insure a sufficient volume of manufactured products for the return load it would be desirable that the area originating the agricultural shipments be within 100 miles of an important city exporting manufactured products. The market for manufactured goods is thus materially extended by the inclusion of a foreign market in which the time factor is a most important consideration. Airplanes carrying industrial commodities from a manufacturing center would fly direct to the exporting city adjacent to an agricultural area, unload the commodities for local distribution and foreign markets, and then fly to the neighboring agricultural center to pick up its return load of perishables.

To maximize the development of the east-west or north-south load of industrial products, it probably will be necessary to fly to the same terminal

Proposed Interchange of Products by Plane Between the Winter Garden and Industrial Area



Edward S. Evans Transportation Research

city during the entire year. If shipments of perishables are not available during the entire year, the pay load of the planes may be reduced to such an extent that the entire operation may not be feasible. The originating point for perishables could be shifted with relatively little difficulty to any point within 300 to 400 miles of the terminus of the east-west or north-south shipments, but greater shifting probably would cause difficulty.

Potential Volume of Produce

Fruit and vegetable shipments from the "Winter Garden" area to the northeastern industrial area of the United States, potentials for air transportation, are estimated at 5 billion ton-miles. The 5 billion ton-miles are net after eliminating the shipments which originated within 750 miles of their point of consumption and after eliminating fruits and vegetables such as potatoes and carrots which probably would not be shipped by air, for various reasons, in appreciable quantity under expected post-war conditions. In addition to the regular shipments now being moved by surface transportation, new business may be originated in the form of semi-tropical fruits; concentrated, consumer-packaged foods, such as fresh orange juice or spinach; and additional tonnage of products resulting from an increase in the consumption of high-quality produce. Because of the difficulty in evaluating the po-

tential quantity of this tonnage, no separate estimate was made but the potential tonnage was weighted in the final estimate of the total ton-miles of fruit and vegetable shipments which may move by plane in the post-war era.

Research by various organizations indicates that if air-cargo rates of less than 10 cents per ton-mile should be offered fruit and vegetable shippers, about one-third of the 5 billion ton-miles of fruits and vegetables originating from the "Winter Garden" area possibly would move by air cargo. If it is assumed that one-third of the 5 billion ton-miles, or 1½ billion ton-miles, moves by air in the post-war era, a fleet of about 380 C-54A's would be required or a fleet of about 830 of the C-47's (a smaller plane) would be needed. The number of planes of each type used would depend upon their availability and their relative suitability to the work to be done. For example, the total ton-mileage could be produced by a combined fleet of 605 planes, of which 190 would be C-54A's and 415 would be C-47's. Here the 190 C-54A's would contribute one-half the ton-mileage, and the 415 C-47's the remainder. This number of usable planes is at least double the maximum number estimated in the Harvard report.

R. W. HOECKER, *Bureau of Agricultural Economics* and L. H. BRITTIN, *Edward S. Evans Transportation Research*.

Cotton Marketing Margins

ONE of the greatest needs of the American cotton industry is increased market outlets and hence more consumption of cotton products. Essential to the problem of expanding these outlets are methods to increase the efficiency and reduce the costs of marketing and manufacturing. Such reductions in costs would make possible increased returns to growers and at

the same time lower prices to consumers.

A wider understanding of this problem will aid in its solution. Wartime price-control and production programs, to say nothing of post-war readjustments to peacetime conditions, emphasize the long existing need for more information on marketing and manufacturing margins for cotton. The

following discussion, taken from a rather extensive study, briefly touches on the margins, or costs, of rendering the various services incident to taking cotton from the farm and delivering the finished product, in the form of clothing and household goods, to the ultimate consumer. This information suggests the extent to which it would be feasible to increase the efficiency and reduce the costs of rendering these marketing and manufacturing services in the years ahead.

In the post-war years of readjustment to peacetime conditions, American cotton will encounter severe competition from cotton grown elsewhere and from synthetic fibers produced in the United States and in other countries. Some indications of the severity of this competition in the post-war period is suggested by the following information on recent developments and trends.

Supplies of foreign-grown cotton have increased greatly during recent years. Total supplies of foreign-grown cottons increased from an average of 16.6 million bales during 1927-33, 43 percent of the world total for all growths, to 23.8 million bales, 52 percent of the world total, during 1934-38, and amounted to more than 27 million bales, about 55 percent of the world total in 1943. Stocks of foreign-grown cottons carried over on August 1 increased from an average of 5.4 million bales in 1927-33, less than 40 percent of the total for all growths, to more than 14 million bales or more than 55 percent of the total for all growths in 1944, and further increases in 1945 are anticipated.

Competition of Other Fibers

The competition of synthetic fibers has increased greatly. World production of rayon expanded from about 457 million pounds in 1930, the equivalent of about 1.1 million bales of cotton, to about 3,473 million pounds in 1942, the equivalent of about 8.2 million bales of cotton. In the United States, the 1943 production of about

656 million pounds of rayon, the equivalent of about 1.5 million bales of cotton, was more than 5 times as great as that of 1930. Prices per pound of rayon staple fibers declined from about 7 times the price of Mid-dling $1\frac{1}{16}$ -inch cotton in the early 1930's to about the same as the price of this cotton in 1943. Technological developments and the resultant improvements of lightweight synthetic yarns during the post-war period favor further expansion in the production and consumption of rayon and the newer synthetics instead of cotton.

These developments and prospects emphasize the desirability of closely examining marketing costs and margins for American cotton with a view to achieving utmost economy in the processing and distributing functions as a means of strengthening its competitive position. Substantial reductions in these costs or margins would have important influences on returns to American cotton growers, on the one hand, and on market outlets and standards of living, on the other.

Marketing Channels

Taking cotton from farms and delivering it in the form of finished articles to ultimate consumers requires the services of many different types of middlemen. These services begin when seed cotton is hauled from the farm to the gin where such services are rendered as conditioning and cleaning of seed cotton, separating the lint from the seed, and packing and wrapping the lint into bales of about 500 pounds. Cotton usually moves from gins to compresses, where it is compressed to higher density, and then to warehouses where it is assembled and stored. From warehouses and compresses it usually moves to mills by railroad, motortruck, or by a combination of motortruck, railroad, and water transport.

At mills, the bales are opened and the cotton is picked, carded, combed (for fine yarns), and spun into yarn. On the average about 4.4 percent of the gross weight of the bale usually is

discarded as tare, about 4.6 percent usually is lost as nonspinnable waste, and most of the remainder, amounting to about 91 percent, is made into yarn. According to Census reports for 1939, for example, about 82.6 percent of the yarn was woven into cloth, about 9.3 percent was used by the knit goods industry, and the remainder was used in making thread, cordage, twine, tire cord, and other products.

Census reports and other information indicate that in recent years about 30 percent of the woven cotton cloth was used in the gray unfinished form, about 11 percent was colored yarn fabrics styled and finished by mills, and about 59 percent was finished from the gray. A large proportion of the finished cloth usually goes to cutters where it is made into wearing apparel and household goods. Of the total output of cotton manufactures in the United States in 1939 about 37 percent went into industrial uses, 38 percent for the manufacture of clothing, and 25 percent for household goods. Clothing and household goods usually go directly or indirectly through wholesalers, jobbers, or other agencies, to retailers who distribute them to ultimate consumers.

Division of Consumer's Dollar

The value of the products are enhanced so greatly by the conversions and services rendered in assembling, processing, manufacturing, fabricating, wholesaling, and retailing that returns to growers for the raw cotton account in many instances for only a very small proportion of the consumer's dollar paid for the finished cotton goods. Data on retail values of a group of 42 cotton articles of clothing and household furnishings and on farm values of equivalent quantities of cotton indicate that during the 17 years 1927-43, returns to farmers for the cotton used amounted on the average to about 10 percent of the consumer's dollar paid for the finished products. The proportion of the consumer's dollar represented by the farm value of the

cotton varied directly with the prices of cotton from about 13 percent in 1928 to about 5 percent in 1932 and to almost 13 percent in 1943.

The fact that, on the average, about 90 percent of the consumer's dollar paid for finished cotton goods is accounted for by marketing and manufacturing margins emphasizes the importance of a break-down to show the items included in these margins. Estimates, based on official data and on other information, were made to show the average distribution of the consumer's dollar paid for apparel and household goods made of cotton in 1933, the last "normal" pre-war year. The data available for this purpose are not complete and in some instances they are not strictly comparable. Consequently, some liberties were taken in approximating margins on the basis of these data and other information. Furthermore, the estimated margins were adjusted to approximate the farm-to-retail price spreads for 42 items of cotton clothing, household textiles, and yard goods, as calculated by the Bureau of Agricultural Economics.

Approximations were made to show the average distribution of the consumer's dollar for apparel and household goods made of cotton on the basis of specific conversions made or services rendered. The results show that on the average in 1939, about 7.5 percent of the consumer's dollar went for farm production, 0.7 percent for ginning and baling, 2.1 percent for all the services rendered in taking cotton from gins and delivering it to mills, 10.5 percent for spinning yarn and weaving cloth, 8.5 percent for dyeing and finishing the cloth, 29.9 percent for manufacturing apparel and household goods, 8.2 percent for wholesaling, and 32.6 percent for retailing.

Information on specific items of cost indicate that salaries and wages accounted for more than half of the spread between retail prices of apparel and household goods made of cotton and returns to growers for the cotton

used. Costs of advertising amounted to about 4.2 percent and profits to all agencies except cotton growers amounted to about 8.5 percent of the retail prices of the finished products. It is interesting to note that salaries and wages for marketing and manufacturing cotton and cotton products amounted to more than 6 times the returns for farm production. Costs of advertising amounted to more than half and profits to all other agencies combined exceeded total returns to growers for the raw cotton.

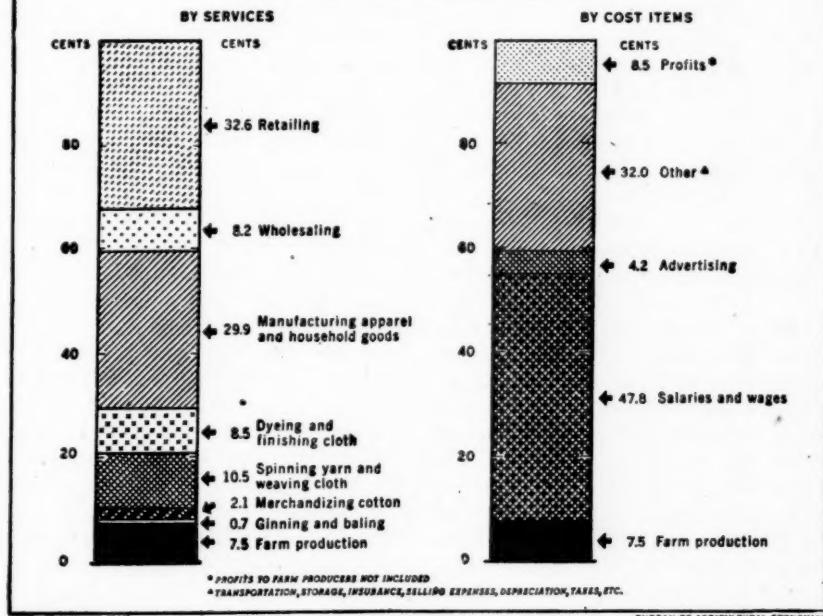
Such data, by showing the approximate proportions of the marketing and manufacturing margins for cotton and cotton products, may serve as a basis for indicating the relative importance of bringing about increased efficiency and reductions in costs for the various agencies and functions involved. According to these data the margins for ginning and baling combined with those for rendering all the merchandising services involved in taking cotton

from gins and delivering it to mills amounted to only about 6 percent of the combined margins for manufacturing and finishing the cloth and fabricating it into wearing apparel and household goods, and to only about 7 percent of the combined margins for wholesaling and retailing. In other words, a reduction of 8 percent in the combined margins for wholesaling and retailing, or for manufacturing and finishing cloth and fabricating it into apparel and household goods, would have more influence in reducing the spread between retail prices to consumers for the finished products and prices to growers for the raw cotton than the complete elimination of all margins or costs for ginning and merchandising the raw cotton.

Although differences in the size of the margins are important considerations, such differences may not reflect very accurately the relative opportunities for making savings in marketing costs and charges that can be passed

APPROXIMATE DISTRIBUTION OF THE CONSUMER'S DOLLAR PAID FOR APPAREL AND HOUSEHOLD GOODS MADE OF COTTON. UNITED STATES, 1939

(BASED ON OFFICIAL AND OTHER DATA AND PARTLY ESTIMATED)



back to cotton growers or on to consumers of the finished products. The means suggested for reducing margins or costs for specific items, functions, or agencies, indicated in many instances the possibilities for bringing about considerable reductions. It was pointed out, for example, that by increasing the volume of ginning per unit of equipment, by using the better equipment more efficiently, and by other econo-

mies, the net cost of ginning and baling cotton might be reduced in many instances by as much as 25 percent, and that margins for retailing textile goods might be reduced as much as 10 percent in many instances through the use of self-service or simplified-service arrangements operated under favorable conditions.

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What Farms for Fighting Men?

FROM Australia, Alaska, Italy, England, Belgium, the Philippines, France, Greenland, South Pacific, and right here in America, literally from all over the world, come 2,300 letters a month to the Department of Agriculture in Washington. These letters are from servicemen and veterans—and from their wives, parents, and sweethearts. All ask about farming.

One soldier wants to know his chances for starting an orange grove. Another is interested in a cattle ranch out West. Another wants to specialize in sheep raising; another in apples; another in tobacco; another a dairy farm; another in wheat. One GI wants to grow coconuts in Hawaii. There is one who wants to raise frogs. A sailor wants to start a fur farm. And then there was the request from the wife of an overseas soldier who wanted help in locating a small island which could be acquired for a farm.

These are just a few examples, but the interests of soldiers, sailors, and veterans cover about every conceivable type of farming. Quite a number are weighing the prospects for dairy farming; and those considering poultry raising comprise one of the largest groups of all—including the few who are studying the prospects for poultry production on a large scale, and the many who are merely thinking of "a little place for chickens." Many ask for detailed information on markets, costs, profits, and farm management. Nearly all want to know about loans.

By and large, most servicemen

appear to have small places in mind—farms that can be worked with their own labor and that of their families. And a good many want to do part-time farming—to live in the country but get the bulk of their income from a job in a nearby town.

A good many of those who write—perhaps a third or more—indicate that they want to own a farm. Some want information to help them to be better farmers when they return to the farms they left on entering the service.

Of those wanting to own farms, a big proportion ask about free lands. They haven't yet learned how few are the tracts left, suitable for farming, that may be acquired under the homestead laws. An equally large group are interested in getting a place in Alaska. Some want to know about their chances of getting surplus military lands. Others want to know what is being done to open up new farm lands through irrigation and drainage.

"Will there be enough farms?" is a question often asked and not easily answered. It can't be answered with a plain "yes" or "no" because there are many elements connected with the supply and demand for farms which affect each other. If everyone wanting a farm—servicemen, war workers, and others—should try to get one tomorrow, regardless of whether the price justified a sound investment, there wouldn't be enough to go round. But many people will not buy if the demand is so strong that prices sky-

rocket beyond what they can reasonably afford to pay on the basis of the prospective income from the farms. Chances to get jobs in industry will also play a big part. Many farm-bred men will prefer to work in town if business is good, and many town boys with an eye on the country will hesitate to gamble on a farm if a good paying job awaits their return to civilian life. These and other factors are discussed in recent reports prepared by the Department of Agriculture.

The present turn-over, or sales of farm tracts, is something between 200,000 and 300,000 farm tracts a year. How many of these veterans will acquire no one knows, but a recent War Department survey of the number of Army men interested in farming furnishes a clue. If the other branches of the armed services are taken into account, there may be as many as 900,000 servicemen who have definite plans for full-time farming or farm jobs. But only about one-third will be looking for farms because the survey shows that two-thirds already have definite farms in mind. And so there may be only 250,000 to 300,000 servicemen actually searching for farms. There will, of course, also be some war-workers returning to farm jobs and farms when the war ends, but the number is unpredictable.

Granting that the Army survey is a good barometer and that 300,000 servicemen will be looking for farms, not all will want to buy tomorrow. Purchases will be spread over a period of months and years. Some will go to school first, and some will get farm jobs in order to get experience. Then, too, many prospective veteran-farmers will change their minds if the demand for farms boosts land prices too high.

Of course, there is sufficient evidence to indicate that it will not be easy for those wanting farms to find enough good ones—farms that will support a family and pay off the mortgage. And this is the real challenge to agricultural leaders and other friends of servicemen—to help them get started

on a sound basis and avoid the mistakes made by servicemen after the last war.

In answering the various questions from servicemen and veterans, the Department has followed the principle that the best practical advice can be given by someone close to the farm. County agents and State agricultural colleges are called upon for this close-to-the-farm advice, and their fine cooperation has been very helpful. Many letters are actually passed on to the field for direct reply to the servicemen. But most of the letters come from men, on the battlefronts or ships at sea, who give no indication of where they are from or where they want to do their farming. Even those who write from hospitals are just feeling the farm waters for the first time.

The Department is constantly preparing information sheets, circulars, and other publications designed to help these men and other prospective farmers.¹ In addition, the Department is working closely with the Armed Forces Institute, Veterans' Administration, and other agencies, in the preparation of study material as well as other information, all directed to help servicemen learn more about the ups and downs of farming.

Army demobilization centers, Army and Navy hospitals, the Veterans' Administration and other Government agencies have occupational consultants and counsellors who are arming themselves with these agricultural materials. And they—more and more in the future—will be directing servicemen to State and county sources, particularly county veterans advisory committees, for information applying to specific farming areas and specific farms.

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¹ Some of the titles are: *Shall I be a Farmer?* *Getting Started in Farming, Where are the Farms,* *If You're Thinking of a Little Place in the Country,* (in preparation), *About that Farm You're Going to Buy.*

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) ¹	Income of industrial workers (1935-39 =100) ²	1910-14=100				Index of prices received by farmers (August 1909-July 1914=100)			
			Wholesale prices of all commodities ³	Prices paid by farmers		Farm wage rates	Livestock and products			
				Commodities	Commodities interest and taxes		Dairy products	Poultry and eggs	Meat animals	All livestock
1935	87	86	117	125	130	103	114	116	116	115
1936	103	100	118	124	127	111	125	114	118	120
1937	113	117	126	131	133	126	130	110	132	127
1938	89	91	115	123	126	125	114	108	115	113
1939	109	105	113	121	124	123	110	95	112	108
1940	125	119	115	122	125	126	119	96	111	112
1941	162	160	127	131	132	154	139	121	146	140
1942	199	241	144	152	150	201	162	151	188	173
1943	239	318	151	167	162	264	193	190	209	200
1944	235	325	152	176	170	315	198	174	200	194
1944—February	244	335	151	175	169	-----	201	168	199	194
March	241	332	152	175	169	-----	199	162	203	194
April	239	327	152	175	169	292	196	151	203	191
May	237	327	152	175	169	-----	194	153	201	190
June	235	327	152	176	170	-----	192	154	200	189
July	231	320	152	176	170	328	194	165	197	190
August	232	324	152	176	170	-----	196	171	201	194
September	231	320	152	176	170	-----	198	179	200	196
October	232	320	152	176	170	325	201	190	201	199
November	232	317	152	177	171	-----	203	207	200	202
December	232	322	153	178	171	-----	203	211	198	202
1945—January	234	-----	153	179	172	324	202	199	203	202
February	-----	-----	179	172	-----	200	183	209	201	-----
Index of prices received by farmers (August 1909-July 1914=100)										
Year and month	Crops								All crops and live-stock	Parity ratio ⁴
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
	1935	97	107	174	94	120	82	119	102	109
1936	108	102	165	95	112	92	104	107	114	90
1937	120	125	204	90	120	104	110	115	122	92
1938	75	71	176	67	88	70	88	80	97	77
1939	72	69	155	70	90	68	91	80	95	77
1940	84	82	136	77	96	73	111	88	100	80
1941	97	89	159	107	130	85	129	106	124	94
1942	120	111	232	149	172	114	163	142	159	106
1943	148	147	325	160	190	179	245	183	192	119
1944	165	168	354	164	209	215	212	194	195	115
1944—February	170	169	348	161	205	206	247	196	195	115
March	169	171	351	161	207	215	242	198	196	116
April	171	172	352	163	207	237	220	200	196	116
May	170	173	350	160	208	232	225	198	194	115
June	165	170	350	163	210	228	231	197	193	114
July	161	168	350	164	209	230	195	194	192	113
August	156	166	355	162	209	214	186	191	193	114
September	155	162	358	170	207	206	166	188	192	113
October	164	161	357	171	211	205	153	187	194	114
November	165	157	368	168	215	195	188	189	196	115
December	167	160	364	168	215	206	228	196	200	117
1945—January	169	163	365	163	214	205	262	200	201	117
February	160	164	360	161	215	211	223	197	199	116

¹ Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

² Total income, adjusted for seasonal variation, revised February 1945.

³ Bureau of Labor Statistics.

⁴ Ratio of prices received by farmers to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above, are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.